A SELECTION FROM THE VAST RANGE OF

Clarke®

QUALITY PRODUCTS

AIR COMPRESSORS
From DIY to industrial. Plus air tools, spray guns and accessories.

GENERATORS
Prime duty or emergency standby for business, home and leisure.

POWER WASHERS
Hot and cold, electric and engine driven - we have what you need.

WELDERS
Mig, Arc, Tig and Spot. From DIY to auto/industrial.

METALWORKING
Drills, grinders and saws for DIY and professional use.

WOODWORKING
Saws, sanders, lathes, mortisers and dust extraction.

HYDRAULICS
Cranes, body repair kits, transmission jacks for all types of workshop use.

WATER PUMPS
Submersible, electric and engine driven for DIY, agriculture and industry.

POWER TOOLS
Angle grinders, cordless drill sets, saws and sanders.

STARTER/CHARGERS
All sizes for car & commercial use.

Clarke
Clarke
Clarke

SPECIFICATIONS

Motor	230V 50hz
Power Rating	1.6kW
Fuse Rating	13Amps
Max. Pump Pressure	110bar
Hot Wash Operating Temp.	70°c
Water Flow Rate	6.0 L/min
Fuel Capacity	4.0 litres
High Pressure Hose Length	8M
Sound Power Level (Guaranteed)	96DbL$_{WA}$
Weight	43.5kg
Dimensions	640x480x760mm

Please note that the details and specifications contained herein, are correct at the time of going to print. However, CLARKE International reserve the right to change specifications at any time without prior notice. Always consult the machine's data plate

ACCESSORIES

A range of accessories designed for use with your washer is available from your Clarke dealer as follows:

Hose Reel	7310300
Brush Attachment	7310305
Water Sandblaster	7310310
Drain Cleaner Attachment	7310315
Traffic Film Remover 5 litre	3050821
Traffic Film Remover 25 litre	3050820
Wash 'n Wax 5 litre	3050815

PARTS and SERVICE CONTACTS

For Spare Parts and Service, please contact your nearest dealer, or CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

Clarke® INTERNATIONAL

This is an important document and should be retained

DECLARATION OF CONFORMITY

We declare that this product complies with the following standards/directives:

- **98/37/EC**
- **89/336/EEC**
- **73/23/EEC**
- **2000/14/EC ANNEX V1 PROCEDURE 1**

Measured Sound Power Level	Guaranteed Sound Power Level
82 dBL$_{WA}$	**96** dBL$_{WA}$

Description: **HOT WASHER**

Model No: **KING 140**

Serial (Batch) No: **See Product Date Plate**

Signed:

Clarke® INTERNATIONAL
Hemnall Street, Epping, Essex CM16 4LG

DOC No. HO75/27

Clarke International is a trading style of Clarke International Limited

TROUBLE SHOOTING

FAULT	CAUSE	REMEDY
Pressure drop	Air in system	**Bleed system by quickly switching off pistol grip several times. If necessary operate the machine briefly without the high pressure hose connected.**
	Worn high pressure nozzle.	**Renew nozzle**
	Pressure regulator incorrectly set	**Set to required working pressure by pushing nozzle in or pulling out**
Pressure fluctuations or pressure drop	No water	**Turn on water tap**
	Water supply hose too long/ too small diameter	**Use minimum 1/2" dia. water supply hose**
	No water due to clogged filter	**Clean water filter (never operate without filter)**
Oil leakage	Worn seals	**Contact your CLARKE distributor**
Motor does not start when switched on	Plug is not connected properly.	**Check plug and lead and have them replaced by a qualified electrician if necessary**
	Mains fuse blown/switched off	**Rectify**
Motor hums when switched on and does not start	Mains voltage too low	**Have electrical connection checked**
	Incorrect dia cable resulting in voltage drop	**Use correct diameter of cable**
	Trigger Switch not operated	**Operate trigger**
Motor cuts out	Motor protection switch has been activated due to overheating or motor overload	**Ensure supply voltage and unit voltage are equal. Switch off and allow to cool for at least three minutes before trying again.**
	Nozzle clogged	**Clean using the supplied nozzle cleaning needle**
Additives are not being supplied	Injector clogged	**Clean**
	Additive container empty	**Fill additive container**
	Lance not correctly set	**Set the lance to low pressure by pulling the nozzle out**

Thank you for purchasing this CLARKE KING 140 Hot Washer.
This machine is a lightweight, portable, high pressure power washer, designed for DIY and light commercial use ONLY
It comprises an electric motor, a pump, a high pressure hose with a trigger and lance, and an adaptor for injecting foam or cleaning agents into the water jet. Additionally, a burner is incorporated to provide hot water when required for hot washing.
Before attempting to use your Hot Washer, please read this instruction manual thoroughly and follow all instructions carefully. By doing so you will ensure the safety of yourself and that of others around you, and you can look forward to it giving you long and satisfactory service.

GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase. This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission. This guarantee does not effect your statutory rights.

CONTENTS

Specifications 2
Parts and Service Contacts 2
Accessories 2
Safety Precautions 4
Electrical Connections 6
Assembly and Preparation for Use 7
Operation 9
Maintenance 11
Servicing 11
Parts List 12
Parts Diagram 13
Troubleshooting 14

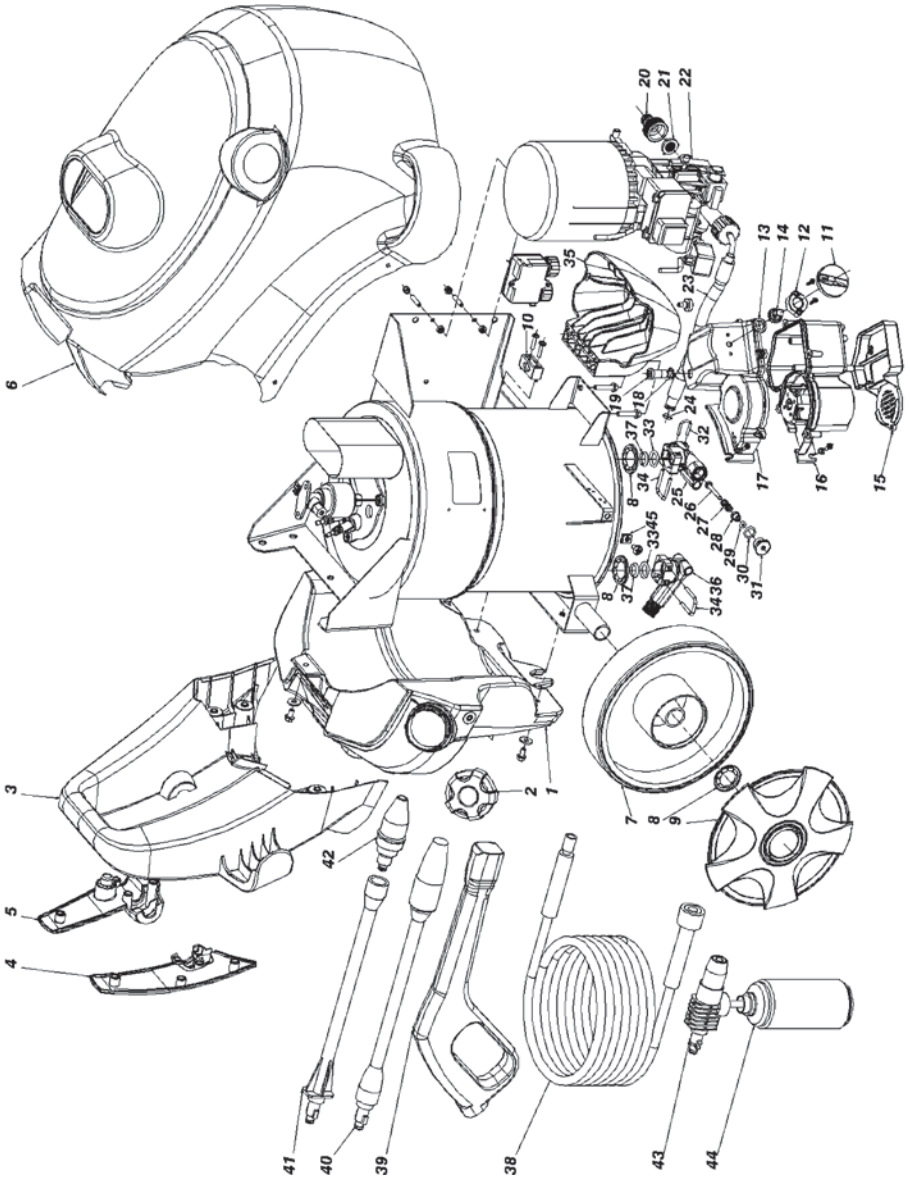
SAFETY PRECAUTIONS

WARNING

Water at high pressure can be dangerous and may cause severe damage to persons or property if subject to misuse.
NEVER allow anyone to operate this equipment unless they are thoroughly reliable and completely familiar with the safety precautions.

1. Never direct the spray jet at any person or animal.
2. Never hold a finger over the high pressure nozzle.
3. Never direct the spray jet at the machine itself or any other electrical equipment.
4. After use, and before disconnecting hoses, release the pressure in the high pressure hose by operating the trigger. Do not attempt to disconnect any hose or coupling with pressure still in the hose.
5. Never operate the machine with any of the covers removed.
6. Do not, attempt any electrical or mechanical repair. If you have a problem with your machine contact your local dealer or Clarke **Customer Services Dept., tel: 020 8988 7400**
7. Never supply any liquid other than water to the water inlet.
8. Use only chemical cleaning agents (detergents) approved for power washing when using the chemical injection facility.
9. Never use the chemical injection facility to introduce solvents e.g.. paint hinners, petrol, oil, etc.
10. Do not operate the machine whilst standing on ladders: use a platform tower or scaffolding.
11. Children should not be allowed to use the machine.
12. We recommend the use of safety goggles when using machine in any application where loose particles of stone or grit etc. may be blown around by the high pressure spray.
13. When not in use, disconnect from the water and electrical supply's, and ensure the system is completely drained. Store in a dry, frost free environment.

PARTS DIAGRAM



PARTS LIST

Item	Description	Qty	Part No.
1	Fuel Tank	1	MPVR87831
2	Tank Cap	1	MPVR49673
3	Handle	1	MPVR87830
4	Hose Support RH	1	MPVR87746
5	Hose Support LH	1	MPVR87745
6	Top Cover	1	MPVR87832
7	Wheel	2	RTRT87839
8	Washer	2	VTR509813
9	Wheel Cover	2	MPVR87834
10	Cable Clamp	1	MEVR87965
11	Black Knob	1	MPVR87748
12	Spacer	1	MPVR87752
13	V-seal Ring	1	GUG023079
14	Tail Piece	1	MPVR87751
15	Cable Clamp Cover	1	MPVR87754
16	Control Box	1	MPVR87743
17	Box Cover	1	MPVR87744
18	Gasket	1	GUG048319
19	Fuse-holder	1	MEVR27264
20	Connector	1	RCVR29602
21	Water Filter	1	FTDT60702
22	Pump	1	PPEL91002
23	Tube	1	TBAP87848
24	O-Ring	1	GUGO0I 060
25	Connector	1	MFVR49976
26	Small Piston	1	RCD587759
27	Spring	1	MLML87845
28	Bushing	1	MPVR87758
29	O-ring 5.23 X 2.62	1	GUG037529
30	O-ring 15.08 X2.62	1	GUGO0I 054
31	Valve Tap	1	RCD587757
32	Plug	1	LAFN37625
33	O-ring 17.04x3.53	2	GUG036290
34	Plug	2	LAFN87846
35	Foot	1	MPVR87747
36	Connector	1	MFVR49975
37	Ring	2	GUVR21 021
38	H.P. Hose	1	TBAP91011
39	Gun	1	IPPR91545
40	Lance	1	LCTE91691
41	Lance Extension	1	LCPR91704
42	Nozzle Head	1	LCTE81742
43	Foam Lance	1	LCPR83620
44	Foam Bottle	1	MPVR60992

14. Disconnect from the mains supply before carrying out any maintenance or servicing.
15. Never pull the washer by the power cable, or yank the cable it to disconnect from the socket. Keep the cable away from heat, oil or sharp edges.
16. Observe all precautions regarding the use of flammable liquids when filling the fuel tank.
17. Take care when handling the lance when hot washing. The metal components can become very hot. It is strongly advised that a good pair of industrial gloves be worn.

18. DO NOT operate the machine indoors or in enclosed areas without adequate ventilation, or in areas where flammable vapours (Petrol, solvents etc.), may be present.
19. Should it be necessary to lift the machine, ALWAYS lift using the foot....DO NOT lift using the plastic cover.

IMPORTANT:

If the machine must be used in an enclosed area, ensure the burner exhaust is vented to the outside atmosphere.

All venting must be in accordance with applicable laws and local ordinances for such installations.

ELECTRICAL CONNECTIONS

WARNING: THIS MACHINE MUST BE EARTHED.

This product is provided with a standard 13 amp, 230 volt (50Hz), BS 1363 plug, for connection to a standard, domestic electrical supply.

Should the plug need changing at any time, ensure that a plug of identical specification is used. IMPORTANT: The wires in the mains lead should be wired up in accordance with the following colour code:

Green & Yellow ..... Earth

Blue ..... Neutral

Brown ..... Live

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

Connect GREEN & YELLOW coloured cord to plug terminal marked with a letter "E" or Earth symbol "⏚".

Connect BROWN coloured cord to plug terminal marked letter "L"

Connect BLUE coloured cord to plug terminal marked letter "N"

We recommend that this machine is connected to the mains supply through a Residual Current Device (RCD).

FUSE RATING

The fuse in the plug must ASTA approved to BS1362 and rated at **13 amps**

IMPORTANT:

If this appliance is fitted with a plug which is moulded onto the electric cable (i.e. non-rewireable) :

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer or most electrical stockists.

EXTENSION CABLES

If an extension cable is used, always ensure it is fully unwound. When used outdoors, ensure the extension cable is specifically designed for outdoor use.

The maximum extension length is 25 metres. Ensure that the wire sizes in the cable are at least 2.5mm^2 in cross section. As a general rule, the extension cable must be thicker than the cable supplied with the washer.

IF IN DOUBT, CONSULT A QUALIFIED ELECTRICIAN.
Do not attempt any electrical repairs yourself.

MAINTENANCE

WARNING:
Ensure the plug is removed from the socket before carrying out any adjustment, servicing or maintenance.

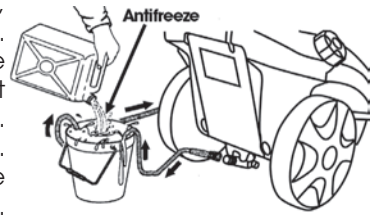
AFTER EACH USE

Ensure the hoses and power cable are coiled and properly stowed. DO NOT allow them to be left casually, in a heap. This invites damage and will cause rapid deterioration. Take care NOT to drape the hoses/cables over the hot exhaust.

STORAGE

Store the Hot Washer in an horizontal position, preferably under cover, protected from the elements. If there is a danger of freezing, the pump should be filled with antifreeze by inserting the inlet and outlet hoses into a bucket of antifreeze as shown in Fig.9. Start the machine and allow the antifreeze to circulate. After a short time stop the machine and store the machine with the antifreeze still within the pump body.

Fig.9.



SERVICING

1.Oil burner

It is recommended that the oil burner be serviced yearly, or as needed depending upon the machines' usage. Please contact the CLARKE International Service Dept. on 0208 8988 7400

2. Limescale

Periodically, check the heating coil for limescale buildup. This will be dependant upon the relative hardness of your water supply.

When de-scaling is required, use a large water tank as your water supply and add de-scaler according to the manufacturers instructions.

Remove the lance extension from the handle assembly, place the handle assembly in the water tank, with the trigger held in the depressed position by some means, and run the pump and heater for approx. 40 mins.

When completed, switch off the heater, and flush out the system with clean water by connecting to a water supply or replacing the contaminated water in the water tank.

3. Soot Build up

Poor grades of fuel oil or inadequate combustion will cause heavy build up of soot on the heating coil. This deposit will insulate the coil and reduce efficiency. It will restrict air flow through the coil, further aggravating the soot build up. Contact your CLARKE dealer or CLARKE International Service Dept. when de-sooting is required.

TURBO NOZZLE

A Lance provided with a Turbo Nozzle is also supplied see Fig.8.

This nozzle has the effect of increasing the pressure at the nozzle, and producing a swirling, conical jet, which is ideal for patio cleaning etc.

Caution should be used when using this lance as damage could occur to the work being cleaned due to higher pressure and swirling action of the jet.

Fig.8.

TURBO NOZZLE

USING DETERGENTS

To use the chemical injection facility, fill the detergent bottle with the requisite detergent and screw the bottle firmly to the lance.

Ensure the trigger safety latch is set to prevent the trigger from being pulled, then remove the standard lance from the gun handle assembly (if fitted), and replace with the detergent lance.

Use ONLY those detergents specifically designed for use with Power Washers. We recommend the use of CLARKE Traffic Film Remover, which is a powerful low foaming agent for car cleaning, patio cleaning etc., or CLARKE Wash & Wax, both available from your CLARKE dealer.

When the trigger is pulled, detergent will be delivered at **LOW** pressure.

Fig.9.

detergent lance and bottle.

B. HOT WASH

Follow the same procedure as for the cold wash, but switch the burner ON once the pump has been switched ON, by turning the on-off knob to the symbol

Take care when using the HOT WASH facility. DO NOT forget that certain components get extremely hot during operation, and will remain so for a period after switching OFF. DO NOT allow anyone, particularly children, near the unit during hot wash operations.

C. SHUTTING DOWN THE MACHINE

If the burner has been used, switch it to the cold wash position 'I' and run for a minute or so until the water being ejected is cold, then switch the machine OFF.

Disconnect from the mains electrical supply, and turn OFF the water supply - disconnect where appropriate.

ASSEMBLY AND PREPARATION FOR USE

Carefully remove the washer and loose parts from the packing and check to ensure that no damage was incurred during transit. Should damage be apparent, please contact your Clarke dealer immediately.

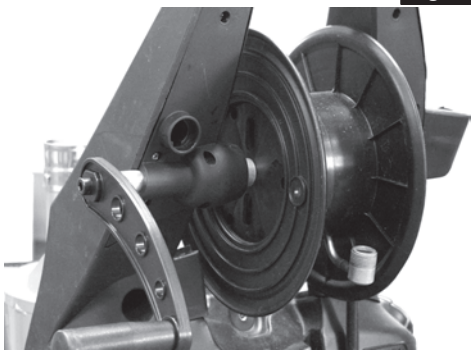
Due to packaging and transportation, some secondary parts require assembling. These tasks are carried out as follows.

1. Handle

Remove the four screws which secure the plastic cover (2 each side)

Attach the handle assembly to the bracket at the rear of the machine, using the four nuts and bolts provided, ensuring the four bosses on the handle sit snugly in the holes in the metal bracket. Tighten the nuts, but be careful not to overtighten.

Fig.1.



2. The Lance and Hose

At the opposite end of the lance nozzle is a spigot with two integral lugs, and a rubber O-ring. Ensure the O-ring is in place and in good condition.

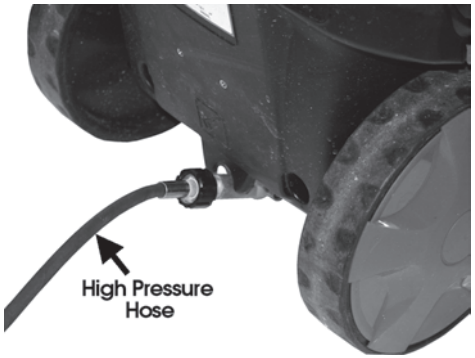
Insert the spigot into the handle assembly. Push home firmly and twist anticlockwise (from the handle end). DO NOT attempt to disassemble the lance/handle assembly.

NOTE: When new, the lance may be a tight fit and a little lubrication, with vaseline or similar, will assist when joining the parts together.

Fig.2.

Attach the high pressure hose to the outlet at the rear of the machine, ensuring it is tight

Fig.3.



NOTE:

The high pressure hose is secured to the handle by means of a latch shown in Fig.4.

To remove the hose, prise the latch down, to the position shown, and pull out the hose.

Fig.4.

Fig.5.

3. Low Pressure Inlet

The low pressure water inlet is located on the front right of the machine.

A suitable hose (not supplied), may be attached, via a quick fit coupling (not supplied but available from any hardware or DIY store) to the coupling provided, (arrowed in Fig.5).

The other end of the hose should be connected to your water supply.

IMPORTANT:
Before use, ensure the water supply is of adequate volume for your needs, e.g., if you use a water butt - ensure it contains sufficient water.

4. Fuel

Unscrew the fuel filler cap, and fill the tank with diesel fuel or paraffin, but **DO NOT mix them.**

WARNING: NEVER USE PETROL

OPERATION

A. COLD WASH

ON-OFF switch Fig.6.

Make certain the PUMP ON/OFF switch mounted on right front of the unit, is set in the 'O' - OFF position.

Connect the plug to the mains supply, preferably via a Residual Current Device.

Turn the water tap fully on.

When starting, it is **IMPORTANT** that you adopt the following procedure:

In order to ease the starting process, and to prevent the possibility of blown fuses, pull the trigger on the lance - it may be necessary to release the safety latch in order to do so.

Hold the trigger in that position whilst switching the pump ON by turning the ON-OFF knob to 'I', and allow the pump to develop full pressure.

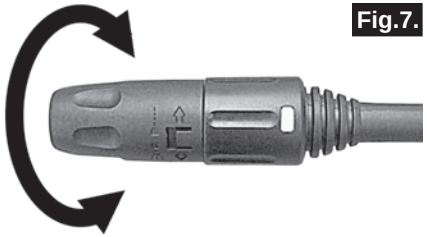
You may release the trigger once full pressure is developed.

WARNING
Ensure the operator is aware that when the trigger is pulled, water at high pressure can cause the lance to kick. It should therefore be held firmly. In addition, care must be taken to ensure that the nozzle is NOT aimed at an area where the water jet will cause damage. i.e. away from people, animals, windows - greenhouses etc., and be aware that splash back could also cause damage if the jet is trained on a nearby wall etc.

In the event that you switch the machine OFF but intend to continue with its use after a few minutes or so, DO NOT depress the trigger, but set the safety latch to prevent it from being pulled. This will ease and assist the subsequent restarting of the motor as pressure will remain equalised on either side of the pump, thereby reducing the load on the motor when restarting.

NEVER run the machine with the water supply disconnected or turned off.

Fig.7.



The lance will produce either a pencil jet, or a Fan jet, as required, by twisting the nozzle as indicated in Fig.7,